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AFIADL
ADL Instructional Technology Update

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AF ADL Technology Update

- What AFIADL Instructional Technology is Working
- Air Force ADL Issues and Concerns
- Proposals for the Way Ahead

AFIADL Instructional Technology

- Responsibilities (AFIADL, Air Force, DoD)
  - Assist, guide, set standards/policy, initiate/implement
    - Sharable Courseware Object Ref Model (SCORM)
    - Applications, tools & protocols
    - AF Personal Trainer System LMS/ADL Portal
    - AF ADL system architecture and infrastructure
    - Security (MC) and bandwidth restrictions
    - AFIADL Website
    - CDC Document Management Prototype

ADLI & Sharable Courseware Object Reference Model (SCORM)

- Anytime, Anyplace Learning means the Web/Internet Technologies
- Enabling specifications for content and LMS
  - Retrievable
  - Reusable
  - Sharable
  - Course content and LMS two parts of a whole
- AFIADL directly involved
  - Testing via Plugfests and CoLab projects
  - Providing feedback and advice
- AFIADL DT provides AF guidance/policy

Applications, Tools & Protocols

- Authoring tools
  - Participation in Plugfests and CoLab funded projects
  - Test/advance SCORM authoring tools, LMSs
- Learning Management Systems
  - Prototyping LMS for AFIADL and AF organizations
- Media-Rich Content Creation & Delivery
  - Streaming audio and video
  - FAQs to be posted to AFIADL Website
- Provide guidance to field via Website and consults

AF Personal Trainer System LMS, AF ADL Portal

- Meridian KSI for prototype LMS
- Two servers currently running at AFIADL
- Working prototype course issues
- Air Force Enterprise system
  - Working with AF/DPDT and AETC Tech Tng & AU
  - Prototype and gather requirements
  - Implement as appropriate
- Develop guidance to provide to AF

AF ADL System Architecture & Infrastructure

- Must be end-to-end
- Interoperate across DoD
- Robust and Secure
- Work within Security Restrictions
- Air Force SC community Issue
  - AFIADL DT working with Air Force SC community
  - DT writing proposal to overcome issues
    - Short and long term
    - Draft MNS

Security (MC) and Bandwidth

- DoD Policy on Mobile Code coming
- AFIADL DT participating directly
  - Participated in AFCA/USAFA MC test
  - Advising OUSD/P&R

AFIADL Website

- Redesign
  - Make information more accessible
  - Expand services
    - Requirement to add FrontPage extensions to AU server

CDC Document Management Prototype

- Identified inefficiencies
  - Manual processing
  - Duplication of effort
  - Excessive reprinting
- XML-based system
  - Documents created using XML
    - Only one version is stored for all functions
  - Publish in multiple formats
    - Word, HTML, PDF
  - Prototype online accessible CDCs for updates and information retrieval

ADL Issues and Concerns/Proposals

- Non-standard infrastructure/security policies
- Mobile Code
- Barriers to enabling technologies
- Develop AF standards
- AFIADL Distributed Content proposal
- Require greater involvement of SC
- Interface to GCSS-AF data repository

Specific Focus of Issues

- Lack of single OPR for Air Force network
  - Base level control creates varied security and varied access even within same command
    - Affects use of streaming media
    - Affects use of other protocols and applications
      - Mobile Code and synchronous technologies
    - Access to technologies is often on and then off again
  - Within AETC, ADL courseware development is hampered in effort to coordinate/collaborate
    - Eight AETC Instructional Technology Flights must follow different policies and procedures
      - AETC SC is addressing this

Net Accessibility

- No Standard AF Policy/Local Base Differences
  - Prevents uniform implementation of Mobile Code guidance – local base may be more restrictive
  - Hampers achievement of “anytime, anywhere” training
    - What works on Sheppard may not work on Vandenberg, Misawa, King Fahd, Lajes, etc.
    - Prevents Airmen from accessing base from outside (home/deployed/TDY)

Mobile Code

- Proposed DoD directive on Mobile Code

  “Software obtained from remote systems outside the enclave boundary, transferred across a network, and then downloaded and executed on a local system without explicit installation or execution by the recipient”

  - What can easily provide media-rich content
    - ActiveX
    - Java Applets

Mobile Code

- Implementation of PKI, VPN, Barrier Reef, other standards may not solve ADL problem
- Controlled use of Mobile Code by client will not work for AF ADL program
  - User must (or can) configure browser
  - Too hard to implement and enforce
  - Access from home and away significantly impacted
  - Security enclave not well defined
    - Coterminous with Base LAN? AF-wide?
  - Sufficiently secure to allow ADL to work?
  - Impact of standard desktop profiles? Hamper ADL?

Enabling Technologies

- Media rich instruction, with online registration & tracking
  - Enablers
    - Mobile Code technologies
    - Streaming media
    - Applications: Shockwave, Flash
- Synchronous and asynchronous learning
  - Synchronous learning and Mobile Code present many barriers to achieve OSD ADL Vision
    - Bandwidth and Firewall security restrictions limit use of collaboration tools

What is needed

- Standard AF-wide policy for Total Force (active/guard/reserve) covering:
  - Access through firewalls for training purposes
  - Standard mobile code implementation
  - Reliance on commercial providers
  - Standard browser functionality
    - Plug-ins, features, etc. compliant with MC policy
    - NIST-validated encryption module

Distributed Content Proposal

- Leverage ATN Datacasting
- Architecture
  - Distribute content
    - Download to Base for distribution
    - Download to regional sites for non .MIL access
    - Centralize management

Alternative Approaches

- ATN satellite datacasting available this year
  - Move content to multiple base level servers
    - Broadcast, not unicast
    - Customer requirements
    - Prototype FY 01
- Edge and caching servers possible
- How to implement/integrate into AF infrastructure
  - Acceptable to Air Force SC community?
  - Solve problems for short/long term?
  - Need assistance from Air Force SC community

SC Involvement in AF ADL

- Information Technology (IT) is a key ADL enabler
- Requirements for anytime, anyplace learning
  - Robust, secure infrastructure needed
  - Deliver media-rich content
- Leverage existing capabilities
  - Existing infrastructure/provide needs to SC
  - Air Technology Network
  - Base Education Centers

QUESTIONS?

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